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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,400	01/30/2002	Takanobu Sugo	215335US0PCT	1663
22850	7590	01/27/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER FUBARA, BLESSING M	
			ART UNIT	PAPER NUMBER
			1615	

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,400

Applicant(s)

SUGO ET AL.

Examiner

Blessing M. Fubara

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Examiner acknowledges receipt of amendment filed 10/29/03.

1. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Applicants' invention is directed to an organic polymer where the side chain contains one or more polymerized N-alkyl-N-vinylalkylamide monomer bonded to the backbone of the polymer and triiodide ion that is on the organic polymer. According to dependent claim 3 and page 7, lines 11-14 of applicants' specification, the N-alkyl-N-vinylalkylamide "is selected from N-vinyl pyrrolidone, 1-vinyl-2-piperidone ... and derivatives thereof." Based on the preceding and contrary to applicants' statement in the remarks filed 10/29/03 that the prior art fails to disclose N-alkyl-N-vinylalkylamide, it is noted that the prior art discloses N-alkyl-N-vinylalkylamide since N-vinylpyrrolidone is N-alkyl-N-vinylalkylamide.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-5, 7, 9-11, 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (WO 85/02422).

Smith discloses alloy fibers such as polyolefin fiber-forming component and polyamide alloying component and the alloying component complexes with iodine on polyvinylpyrrolidone homopolymer or copolymer (abstract, page 4, lines 22-25 and 30-35). In the copolymer, the

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co-monomer is one or more of vinyl acetate, vinyl propionate, styrene, alkyl vinyl ether, alkyl acrylates or methacrylates, acrylic or methacrylic acid, acrylonitrile or methacrylonitrile (page 5, lines 1-31). The iodine is carried on the polyvinylpyrrolidone as the tri-iodide ions. Iodine is impregnated using iodine solution in alcohol, CCl₄, CHCl₃ or perchloroethylene; iodine is also impregnated in the vapor phase (page 8, lines 6-8, page 21, lines 23-33). The teachings of Smith meet the limitations of the claims.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 6, 8, 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (WO 85/02422).

Smith clearly teaches the instant claimed invention except that Smith does not teach amounts of the iodine. Regarding claim 8, there is no demonstration in applicants' disclosure that graft polymerization produces iodinated polymer that provides unusual results. Differences in amounts of iodine in the polymer would not support patentability over the prior art since it is within the purview of the person of ordinary skill or the skilled artisan to incorporate an amount of iodine that would provide the desired anti-microbial effect. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare fiber material that comprises anti-microbial tri-iodide ions carried on homo- or co-polymer polyvinylpyrrolidone. One having ordinary skill in the art would have been motivated to optimize the amount of iodine with the expectation of providing the desired anti-microbial effect.

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Observation:

There is no disclosure of derivatives of N-alkyl-N-vinylalkylamide apart from those recited in the claim 3. Secondly, it is not clear how N-vinylpyrrolidone is N-alkyl-N-vinylalkylamide. Applicants are respectfully requested to address these issues.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blessing M. Fubara whose telephone number is (571) 242-0594. The examiner can normally be reached on 7 a.m. to 3:30 p.m. (Monday to Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Blessing Fubara
Patent Examiner
Tech. Center 1600

A handwritten signature in black ink, appearing to read "Blessing Fubara", is written over the printed name of the examiner.